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09/515,809	02/29/2000	Steve Trong	CISCO-1937	9991

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EXAMINER

ZIA, MOSSADEQ

ART UNIT PAPER NUMBER

2134

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/515,809

Applicant(s)

TRONG, STEVE

Examiner

Mossadeq Zia

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02-29-00.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 recites the limitation "firewall application" in line 3, 4, 5. There is insufficient antecedent basis for this limitation in the claim. It is the examiners understanding that this limitation should be declared as part of the system in claim 1.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 4, 5-8, 12-14 are rejected under 35 U.S.C. 102(b) as anticipated by Patent No. 5,689,566, Nguyen.
5. Regarding claims 4 and 12, Nguyen shows a communication system having a checkpoint server, a router, and a firewall application, said router having a router server and at least one application module running therein, a method for constructing separate but interrelated data comprising:

Determining whether there is data (handle) available within the checkpoint server (Nguyen, col. 7, line 41-43); and

Recovering, by the firewall application and the at least one application module (session write thread, Nguyen, col. 2, line 57-58, col. 7, line 34-35, 48),

said data from the said checkpoint server if there is data available within said checkpoint server (Nguyen, col. 7, line 36-38, 41-42).

6. Regarding claims 5 and 13, Nguyen shows a communications system having a checkpoint server, a router, and a firewall application having at least one connection therethrough, a method for uniquely checkpointing data comprising:

creating a unique connection identifier corresponding to each at least one connection through the router (session key, Nguyen, col. 5, line 7-8);

checkpointing data regarding said at least one connection through said router within said checkpoint server (requester, Nguyen, col. 5, line 7-8, col. 11, line 41, fig. 1, element 110); and

encoding (encrypt) said checkpointing data within said checkpoint server with said corresponding unique connection identifier (Nguyen, col. 5, line 27-28).

7. Regarding claims 6, 14, Nguyen shows claim 5 and 13 above, and further show the acts of:

recovering said checkpointing data (Nguyen, col. 8, line 12-15, col. 9, line 49-50); and reassembling said checkpointing data according to said unique connection identifier (Nguyen, col. 7, line 51-52, 55-56).

8. Regarding claim 7, Nguyen shows a communications system apparatus, having a router with connections running therethrough, the router further having a router server therein, said communications system comprising:

Art Unit: 2134

a firewall application device running within the router, said firewall application device responsive to connections made through said router; and

a checkpoint server device running within said router, said checkpoint server device responsive to said firewall application device (Nguyen, col. 2, line 57-58, fig. 4A-C, col. 9, line 11-12), said firewall application device configured to create a unique connection identifier (session key) in response to connections made through said router (Nguyen, col. 5, line 7-8), and said firewall application device configured (Nguyen, col. 9, line 60-61) to checkpoint data associated with said connections (Nguyen, col. 5, line 28-29) with corresponding said unique connection identifier embedded therein to said checkpoint server (Nguyen, col. 5, line 7-8).

9. Regarding claim 8, Nguyen shows claim 7 above, and further show firewall application device is further configured to recover said data from said checkpoint server (Nguyen, col. 8, line 12-15, col. 9, line 49-50) and reassembling said data using said unique connection identifier embedded within said data (Nguyen, col. 7, line 51-52, 55-56).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 3, 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent No. 5,689,566, Nguyen in view of "Active Reliable Multicast", Lehman et al.

Art Unit: 2134

12. Regarding claims 1 and 9, Nguyen shows a communication system having a checkpoint server and a router, said router having a router server, a method for reconstructing separate but interrelated data comprising:

determining whether there has been a new connection having a corresponding base layer established through said router (request router, Nguyen, col. 7, line 25, 28-32);

if there is new connection through said router, creating a unique connection identifier (communication handle) for said new connection (response signal, Nguyen, col. 7, line 36-38, 43-44);

but fail to show store said corresponding base layer with said unique connection identifier therein within said checkpoint server;

determining whether there has been a change of state for an existing connection running on said router; and

if there has been a change of state for an existing connection running on said router, then checkpointing data (packet) corresponding to said existing connection to said checkpoint server with said unique connection identifier embedded therein (stores the response signal into the packet header, Nguyen, col. 7, line 45-46), wherein checkpoint is a process including critical data regarding the state of a connection through the router is stored, wherein the connection is re-established.

However, Lehman teach loss recovery scheme where router perform best-effort caching of multicast data for possible retransmission. When a router receives a NACK, indicating that a receiver has detected a packet loss (determining change of state), it retransmits the request packet

Art Unit: 2134

if that packet is in its cache (checkpointing data in checkpoint server, Lehman, page 582, col. 2 5<sup>th</sup> para.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nguyen as per teaching of Lehman to include the novel loss recovery scheme gain the benefit of protecting the sender and network bandwidth from unnecessary feedback and repair traffic (Lehman, page 581, col. 2, 2<sup>nd</sup> para.).

13. Regarding claims 3, 11, Nguyen and Lehman shows claim 1 and 9 above, and further show the acts of:

determining whether there is data available within said checkpoint server for a firewall application (application, Nguyen, col. 2, 57-59, col. 9, line 49); and

recovering said data by said firewall application from said checkpoint server if there is data available within said checkpoint server (if it has that packet in its [router's] cache, Lehman, page 582, col. 2, last para.) for said firewall application.

### ***Response to Arguments***

14. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant should submit an argument under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them.

Art Unit: 2134

*Particularly,*

In addition, the reply filed on March 23, 2004 is not fully responsive to the prior Office

Action because of the following omission(s) or matter(s): 35 USC § 112 second paragraph rejection regarding claim 3. Thusly the rejected is being repeated.

***Conclusion***

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mossadeq Zia whose telephone number is 703-305-8425. The examiner can normally be reached on Monday-Friday between 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Morse can be reached on 703-308-4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2134

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mossadeq Zia  
Examiner  
Art Unit 2134

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5/26/04



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